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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,930	08/02/2001	Hiroki Kanai	NITT.0020	4634
38327	7590	07/14/2004	EXAMINER	
REED SMITH LLP 3110 FAIRVIEW PARK DRIVE, SUITE 1400 FALLS CHURCH, VA 22042			CHEUNG, MARY DA ZHI WANG	
			ART UNIT	PAPER NUMBER
			3621	
DATE MAILED: 07/14/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,930

Applicant(s)

KANAI ET AL.

Examiner

Mary Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 8-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Status of the Claims

1. This action is in response to the amendment filed on April 7, 2004. Claims 1-14 are pending. Claims 1-3 and 5-7 have been amended. Claims 8-14 have been added.
2. The newly added claims 8-14 involve new matters, such as data aggregation unit and billing unit, and a different class/subclass search will be required for the added claims; thus, claims 8-14 are withdrawn from this examination.

Response to Arguments

3. Applicant's arguments filed April 7, 2004 have been fully considered but they are not persuasive.

Applicant's arguments are based on believing that Mummert (U. S. Patent 6,427,152) fails to teach estimating data amount in a rental storage for future storage usage. Applicant asserts that Mummert's teaching of estimating of container utilization is not the same as "estimating data amount" usages. Examiner respectfully disagrees because the utilization of container represents the usages of the sum total of all the sizes of the objects in the container (column 3 lines 26-30), and the objects includes various types of data. Thus, the applicant's arguments are reversed and the rejections are maintained.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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5. Claims 3-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts. In the present case, claims 3-5 only recite abstract ideas. The recited steps of merely providing a storage rental contract between a rental storage service provider and a rental storage service user, estimating future storage usage of the user, and proposing a recommended storage usage contract to the user. These steps do not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to optimize the storage usages over other methods.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some of the recited steps does not confer statutory subject

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matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps in claim 3-5 are directed to anything in the technological arts as explained above with the exception of the recitation in the preamble that the method is using "a network". Looking at the claim as a whole, nothing the body of the claim recites any structure or functionality to suggest that the recited steps are performed by using the network. Therefore, the preamble is taken to merely recite a field of use.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, claims 1 and 3-5 produce estimation of future storage usage and proposing a recommended storage usage contract (i.e., useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 3-5 are deemed to be directed to non-statutory subject matter. Applicant is advised to include a positive recitation by using advance technologies, such as the recitation in claim 2 that "using the storage of said rental storage service provider by the rental storage service user".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by Wollrath et al., U. S. Patent 6,263,350 in view of Mummert et al., U. S. Patent 6,427,152.

As to claim 1, Wollrath teaches a service method of a rental storage, in which a rental storage user (*"the client"*) uses the rental storage provided by a storage provider (*"the server"*) on a network and said rental storage user and said storage provider communicate with respect to the rental storage service, comprising the steps of using storage of said storage provider by the rental storage user (title and column 12 lines 38-48 and column 12 lines 53-59).

Wollrath does not specifically teach the service method of a rental storage comprising the steps of: providing by the storage provider estimation of a data amount in the rental storage for future storage usage of said rental storage user, based on the history of storage usage of said rental storage user. However, this matter is taught by Mummert as providing the storage provider system the estimation of container utilization

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for future storage usage based on the history of the storage usage (column 3 lines 26-34 and column 4 lines 6-21 and column 5 line 1 – column 6 line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the service method of Wollrath to include the feature of providing the rental storage service provider the estimation of future storage usage based on the history of the storage usage as taught by Mummert because this would accurately project the future utilization of the storage for preventing service outages caused by storage filled to capacity as stated by Mummert (column 2 lines 6-11 and column 4 lines 17-21).

Wollrath modified by Mummert as discussed above further teaches the storage user request rental of the storage comprising various parameters (Wollrath: column 12 line 43-45, 65-67). Wollrath modified by Mummert does not explicitly teach reporting the estimation to said storage user. It would have been obvious to one of ordinary skill in the art to allow the estimation in the teaching of Wollrath modified by Mummert to be reported to the storage user because this would allow the user to better determine the parameters for requesting the rental storage.

9. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by Wollrath et al., U. S. Patent 6,263,350 in view of Mummert et al., U. S. Patent 6,427,152 in further view of Shear, U. S. Patent 5,410,598.

As to claim 2, Wollrath teaches a service method of a rental storage, in which a rental storage service user ("*the client*") uses the rental storage provided by a rental storage service provider ("*the server*") on a network and said rental storage service user

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and said rental storage service provider communicate with respect to rental storage service, comprising the steps of (title and column 12 lines 38-48):

- a) making a contract between said rental storage service provider and said rental storage service user so as to configure contract options based on the contract of use of storage service (column 12 line 38 – column 14 line 8; *specifically, in column 12 lines 44-45 the server grants a lease to the client corresponding “a contract”, in column 12 lines 45-52 the entire lease period and the portion of the lease period corresponding to “the contract options”*);
- b) using storage of said rental storage service provider by the rental storage service user (column 12 lines 53-59);
- c) reconfiguring said contract options by said rental storage service provider (column 13 lines 26 – column 14 line 8; *specifically, “reconfiguring said contract options” corresponding to renew the lease, cancel the lease, reject the lease, etc. in Wollrath’s teaching*).

Wollrath does not specifically teach reporting the history of storage usage record and an estimated amount of data of storage usage to the rental storage service user from the rental storage service provider. Mummert teaches reporting the storage service provider system the history of storage usage record and the estimated amount of data utilization of storage usage for future storage usage based on the history of the storage usage (column 3 lines 26-34 and column 4 lines 6-21 and column 5 line 1 – column 6 line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the service method of Wollrath to include the

feature of reporting the history of storage usage record and the estimated amount of data utilization as taught by Mummert because this would accurately project the future utilization of the storage for preventing service outages caused by storage filled to capacity as stated by Mummert (column 2 lines 6-11 and column 4 lines 17-21).

Wollrath modified by Mummert as discussed above further teaches the storage user request rental of the storage comprising various parameters (Wollrath: column 12 line 43-45, 65-67). Wollrath modified by Mummert does not explicitly teach reporting the history of storage usage record and the estimated amount of data to said storage user from the rental storage service provider. It would have been obvious to one of ordinary skill in the art to allow the history of storage usage record and the estimated amount of data in the teaching of Wollrath modified by Mummert to be reported to the storage user from the rental storage service provider because this would allow the user to better determine the parameters for requesting the rental storage.

Wollrath modified by Mummert does not specifically teach reporting the charge to the rental storage service user by the rental storage service provider, and paying the charge for the use of said storage by the rental storage service user to the rental storage service provider. However, Shear teaches reporting the charge to the user by the service provider, and paying the charge for the usages used by said user to said service provider (abstract and column 15 lines 46-60 and column 16 lines 41-53 and column 22 lines 41-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the service method of Wollrath modified by Mummert to include the feature of reporting the charge to the rental storage service

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user by the service provider, and paying the charge for the usages used by said user to the service provider because this would allow the rental storage service provider to efficiently collect the royalties for the services have been provided to the users.

As to claim 3, Wollrath teaches a service method of a rental storage, in which a rental storage service user (*"the client"*) uses the rental storage provided by a rental storage service provider (*"the server"*) on a network and said rental storage service user and said rental storage service provider communicate with respect to rental storage service, comprising the steps of: when said rental storage service provider and said rental storage service user make a contract and the contract options based on the contract of use of said storage specifies contracted amount of data (column 12 line 38 – column 14 line 8; *specifically, in column 12 lines 44-45 the server grants a lease to the client corresponding "a contract", in column 12 lines 45-52 the entire lease period and the portion of the lease period corresponding to "the contract options", in column 12 lines 45-48 and column 12 line 65 – column 12 line 25 the leasing period and the access parameters corresponding to "the contract amount"*).

Wollrath does not specifically teach estimating by said rental storage service provider the storage usage in the future based on the history of amount of data of storage usage by said rental storage service user. However, Mummert teaches estimating by the storage service provider the future storage usage based on the history of amount of data utilization of the storage usage (column 3 lines 26-34 and column 4 lines 6-21 and column 5 line 1 – column 6 line 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the service method of

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Wollrath to include the feature of estimating the future storage usage based on the history of the amount of data utilization of storage usage because this would accurately project the future utilization of the storage for preventing service outages caused by storage filled to capacity as stated by Mummert (column 2 lines 6-11 and column 4 lines 17-21).

Wollrath does not specifically teach proposing to said rental storage service user a recommended contract on the amount of data according to the estimation. The limitation of proposing the amount of data according to the estimation is taught by Mummert as projecting the storage capacity, and defining actions to prevent the utilizations of reaching the storage capacity (column 3 lines 36-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the rental storage service method in the teaching of Wollrath modified by Mummert as discussed above to include the feature of projecting the storage capacity and defining the actions to prevent the utilization of reaching the storage capacity as taught by Mummert because this would allow the rental storage service provider to better predict the future capacity of the storage and to better ensure the availabilities of the storage to the users. Wollrath modified by Mummert does not specifically teach proposing to said storage service user a recommended contract on the amount of data according to the estimation. It would have been obvious to one of ordinary skill in the art to allow the feature of defining the actions to prevent the utilization of reaching the storage capacity in the teaching of Wollrath modified by Mummert to further include the feature of proposing to the storage user a recommended contract on the amount of data according

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to the estimation because this would allow the storage user to better determine the leasing parameters before requesting the lease from the rental storage service provider, this would also better ensure the rental storage service provider to provide the sufficient storage memory during the granted lease period.

Wollrath modified by Mummert does not specifically teach the contract and the contract options based on the contract of use of said storage specifies a charge system for the contracted amount of data according to the predetermined usage. However, Shear teaches a charge system that charging the users according to the predetermined usage (column 16 lines 41-45; *specifically, charging the users according to the predetermined usage corresponding to charging the user an annual fee or a flat fee for unlimited usage*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the contract and the contract options in the teaching of Wollrath modified by Mummert to include the feature of specifying a charge system to charge the users according to the predetermined usage because this would allow the service provider to ensure its royalties for the services that will be provided to the users according to the contract.

As to claim 4, Wollrath modified by Mummert and Shear as discussed above does not explicitly teach proposing reduction of amount of data contracted for the storage usage if the storage usage estimated is less than the currently contracted storage usage. However, Wollrath teaches the rental storage service provider and the storage user to negotiate the storage lease (column 19 lines 51-54), and Mummert teaches a threshold is an artificial limit that used for the storage capacity planning

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(column 3 lines 36-53). It would have been obvious to one of ordinary skill in the art to allow the teaching of Wollrath modified by Mummert and Shear to include the feature of proposing reduction of amount of data contracted for the storage usage if the storage usage estimated is less than the currently contracted storage usage because this would allow the rental storage service provider to better optimize the storage capacity planning.

As to claim 5, Wollrath modified by Mummert and Shear as discussed above further teaches when said rental storage service user updates said contract options in accordance with a desirable amount of data of storage usage recommended by said rental storage service provider, if the amount of data of storage usage by said rental storage service user exceeds the contracted amount of data for storage usage reconfigured within the contract period of the contract, said rental storage service user will be allowed using the storage service for the data beyond the contracted amount of said storage usage (see claim 3 above; Wollrath: column 13 lines 50-56 and column 15 lines 60-63; *specifically, the user exceeds the contracted amount corresponding to the insufficiency of the original lease in Mummert's teaching*).

As to claim 6, Wollrath modified by Mummert and Shear as discussed above does not explicitly teach proposing by said rental storage service provider a reduction plan of the amount of data of storage usage used by said rental storage service user, and reducing the amount of data of storage usage used by said rental storage service user in accordance with the recommended reduction plan of data, wherein the step of reconfiguring said contract options is performed after the proposing step and the

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reducing step. However, Wollrath teaches the rental storage service provider and the storage user to negotiate the storage lease and reconfiguring the contract options (column 13 lines 26 – column 14 line 8 and column 19 lines 51-54), and Mummert teaches a threshold is an artificial limit that used for the storage capacity planning (column 3 lines 36-53). It would have been obvious to one of ordinary skill in the art to allow the teaching of Wollrath modified by Mummert and Shear to include the feature of proposing by the rental storage service provider a reduction plan of data used by the storage user, and reduce the data used by storage user in according with the recommended reduction plan, and reconfiguring the contract options after the proposing and the reducing steps because this would allow the rental storage service provider to better optimize the storage capacity planning.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by Wollrath et al., U. S. Patent 6,263,350 in view of Mummert et al., U. S. Patent 6,427,152 and Shear, U. S. Patent 5,410,598 in further view of Kenley et al., U. S. Patent 5,276,867.

As to claim 7, Wollrath modified by Mummert and Shear teaches reducing the data used by the rental storage service user in accordance with the recommended reduction plan as discussed in claim 6 above. Wollrath modified by Mummert and Shear does not specifically teach when said rental storage service user deletes data in use in accordance with the recommended reduction plan of the amount of data of storage usage, said rental storage service provider duplicates on a portable medium a backup copy of the data specified to delete by said rental storage service user, and said

rental storage service provider sends the backup copy of the data to the rental storage service user. However, Kenley teaches migrating the selected data from data storage to a backup storage when the quantity of data stored in the data storage exceed the threshold, providing the user the backup copy of the migrated data (column 2 lines 56-68 and column 3 lines 32-47 and column 5 lines 40-41; *specifically, in column 3 lines 40-42 the optical disk backup storage corresponding the portable medium for storing a backup copy as claimed*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the recommended reduction plan in the teaching of Wollrath modified by Mummert and Shear to include the feature of migrating the selected data in accordance with the recommended reduction plan from the rental storage to a backup storage, and providing the storage user the backup copy of the migrated data because this would allow the rental storage service provider to better optimize the storage capacity planning.

Conclusion

11. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Cheung whose telephone number is (703)-305-0084. The examiner can normally be reached on Monday – Thursday from 8:00 AM to 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell, can be reached on (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

The fax phone number for the organization where this application or proceedings is assigned are as follows:

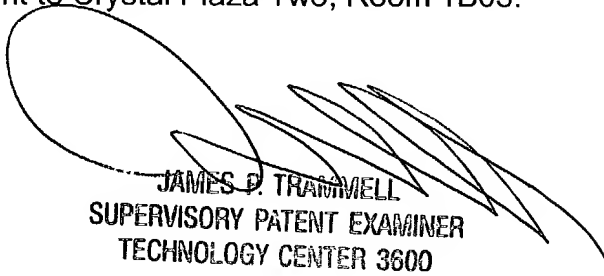
(703) 872-9306 (Official Communications; including After Final

Communications labeled "BOX AF")

(703) 746-5619 (Draft Communications)

Hand delivered responses should be brought to Crystal Plaza Two, Room 1B03.

Mary Cheung
Patent Examiner
Art Unit 3621
July 9, 2004


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